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Abstract Thermal diffusivity and thermal expansion in high-conducting solids can be measured by means of a capacitance method, which turns out to be simple, reliable, and accurate and yields the first property with an accuracy of ∼1% and the second one with an accuracy of ∼2%. Preliminary results, which are consistent with the literature, have been obtained on pure aluminum (99.999%) and on commercial copper, both at near room temperature.

Key words capacitance method - thermal diffusivity - thermal expansion

References secured to subscribers.